

Patent Claims

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- 5 1. Mixer for mixing at least two flows of gas or other Newtonian liquids, with a main  
flow channel (1) through which the first flow of gas passes, which contains  
incorporated surfaces (7) that are arranged therein and affect the flow, the  
incorporated surface (7) being a vortex-generating disc with leading edges (8) that are  
oriented against the flow and around which the flow can move freely, the shape of this  
10 disc generating components that act in the main direction of flow (9) of the gas flow  
as well as transversely thereto, characterized in that the incorporated surface (7) has a  
chamber (13, 13a, 13b) into which a separate flow channel (5) for a second flow of  
gas leads; and in that the chamber (13, 13a, 13b) is provided on the rear side (10) of  
the incorporated structure (7) that faces away from the inflow of the first flow of gas  
15 with outlet openings (12) into the first flow of gas.
2. Mixer as defined in Claim 1, characterized in that the opening of the second flow of  
gas into the first flow of gas is located in the region of the front half of the  
incorporated surface (7).
- 20 3. Mixer as defined in Claim 1, characterized in that chamber (13, 13a, 13b) is provided  
with side walls that are arranged at an angle to the incorporated surface (7) and stiffen  
the said incorporated surface (7) against bending loads.
- 25 4. Mixer as defined in one of the Claims 1 to 3, characterized in that the separate flow  
channel (5) is routed to the incorporated surface (7) on the front side thereof.

5. Mixer as defined in one of the Claims 1 to 4, characterized in that the incorporated surface (7) is supported in the main flow channel (1) by struts (11), one of which is tubular and forms the separate flow channel (5).

5 6. Mixer as defined in one of the preceding Claims, characterized by a device to adjust the angle ( $\alpha$ ) of the incorporated surface (7) relative to the main direction of flow (9).

7. Mixer as defined in one of the preceding Claims, characterized in that the outlet openings (12) from the separate chambers (13a, 13b) are arranged one behind the other.

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